

Western European Markets for Alaska Logs and Lumber

Economic Situation and Market Overview

The European market for wood products is a complex agglomeration of separate countries driven by varying economies, political systems, consumer preferences, building codes, and sources of supply, all of which shape the distinctly different demands for wood products. The markets for wood products vary greatly from country to country, making a discussion of the demand for wood products for the whole of "Western Europe" difficult to discuss. Instead, the countries of Western Europe should be treated separately. This analysis has identified particular countries where there has been demand for decay resistant species and presents opportunities for Alaska species. It also discusses the economic and consumer factors that affect demand for these products.

Europe has historically been a difficult market for suppliers located on the US West Coast to access. For example, in 1998, Germany was the tenth leading destination for PNW (Washington and Oregon) wood products, totaling only \$3.9 million (US Department of Commerce 1999). Most of European country's demand for softwood products is supplied domestically since shipping costs within Europe are moderate, exchange rates between European countries are somewhat similar, and products provided by European suppliers are often less expensive than those sold by US suppliers. Conversely, shipping costs from the western US are higher, inter-continental shipping can be lengthy, and exchange rates fluctuate. Since demand in the US has been extremely strong over the past few years, US suppliers also do not see a great need to focus on the European market and US wood products have not been price competitive. Identifying markets for Alaska wood products can be particularly challenging since the cost for Alaska mills to manufacture and ship wood products from Alaska is even higher than the costs for mills in the continental US. Given these challenges, a few growing markets have been examined to determine their potential for market entry by Alaska suppliers of naturally decay-resistant species such as western red cedar, hemlock, and yellow cedar. The end-use markets discussed in this section were selected on the basis of apparent recent accelerated activity and at the funding agency's request. These markets include the UK decking market, the Scandinavian siding market, and the German window market.

The most notable areas of expansion have been the decking market in the UK and the decking and siding markets in Denmark. There has also reportedly been an increase in the popularity of wooden garden furniture. According to representatives of the Timber Decking Association and Danish Timber Trade Federation, there are no statistics about the size of these markets since they are so new, but anecdotal evidence suggests that demand is increasing (Bjørner 2000 and Milner 2000). Since some European economies have started to recover from lagging 1998 markets, when interest rates increased and consumers feared a recession, housing starts have increased and repair and remodel activity has started to improve, particularly in the UK (FAS 1999d). There were 184,000 housing starts in 1998, 16,000 fewer than 1997, yet analysts predict that the number of starts in 2003 will equal 1997 figures (FAS 1999d). Construction activity in other countries such as France, Belgium, and Denmark has either been relatively flat or has declined during the past few years.

Despite the lower than average number of housing starts, repair and remodel activity comprises a large portion of the construction activity in the UK, which is typically the case when the number of new housing starts is depressed. According to the Department of Environment, Transport and Regions, in 1998, 48% of the US \$62 billion construction sector was spent on repair and remodel work (FAS 1999d). This partially explains the surge in the popularity of new decks. While individuals may not be able to afford a new home, many can afford to build a new deck to improve their existing home.

While repair and remodel activity and the popularity of decks may improve the demand for lumber, most dimension lumber used for construction in Europe is spruce (*picea abies*) imported from Scandinavian and Eastern and Central European suppliers. In fact, price pressures from Eastern European suppliers, an overvalued pound, and the weak Swedish krona, have caused some sawmills in the UK to cut back or close production. Price is key and the ample supply of European whitewood and redwood makes market entry for the US difficult. Despite the strong competition that domestic sawmills are experiencing, the UK Forestry Commission predicts that domestic softwood timber production will increase from 1998 levels of 8.4 million cubic meters to 15 million cubic meters by 2025, making the market for imports more difficult. In 1998, of the UK's 3.9 million acres of forests managed for timber

production, 65% of the forests were softwoods with 32% (1.2 million acres) made up of Sitka spruce, 9% Scots pine, 6% Lodgepole pine, 6% Larch, 4% Norway spruce, and 8% other conifers (FAS 1999d).

Current Exports

Exports from Alaska to Europe are understandably, inconsistent. Shipping routes are complex and much of Europe's timber demand is filled by Scandinavian or Austrian suppliers. More recently, Eastern European suppliers have become an additional source of competition for US suppliers.

Solid wood exports from Alaska to Europe totaled less than \$1.5 million in 1998. This was a significant increase from prior years and was due to a large shipment of spruce logs to Switzerland in 1998. As shown in Table 25, southern yellow pine and Douglas fir, both used for construction, are the leading US species consumed by Europeans, although exports of southern yellow pine have dropped dramatically over the past few years. Much lower volumes of Sitka spruce and cedar has also been exported from the US and Alaska. Total exports from Alaska to Europe are negligible and include less than 11,000 cubic meters of logs shipped in 1999, no lumber exports, and small volumes of miscellaneous value-added products.

Table 25. US softwood lumber exports to Europe, by species (cubic meters).

	1992	1993	1994	1995	1996	1997	1998	1999
Coniferous, NESOI	70,757	28,842	28,511	43,079	38,880	81,410	102,813	78,397
Douglas fir	233,541	127,704	109,737	79,992	67,055	68,670	62,455	59,514
Pine, NESOI	90,858	47,700	52,256	20,420	16,136	16,103	14,186	28,424
Southern yellow pine	474,862	322,494	317,906	301,073	269,433	8,860	33,994	14,686
Larch	1,462	1,879	2,390	490	275	1,512	10,375	14,445
Spruce, NESOI	8,837	6,956	1,574	1,590	754	1,607	885	10,105
Redwood	1,687	2,776	2,800	1,993	5,334	6,844	6,945	9,007
Eastern white pine	5,762	7,736	7,254	5,648	3,059	4,083	5,836	8,412
Hemlock	16,224	6,719	7,400	2,272	5,674	12,735	8,678	5,914
Fir, NESOI	8,560	3,779	1,793	10,657	4,368	6,072	6,108	3,882
Western red cedar	1,334	1,766	2,415	1,629	3,126	2,769	2,097	3,119
Logepole pine	9,178	1,864	860	424	2,515	4,965	1,451	2,203
Ponderosa pine	12,248	7,312	5,248	4,274	2,494	4,077	2,759	1,617
Cedar, NESOI	1,328	920	1,212	1,197	728	818	1,015	799
Sitka spruce	780	905	871	53	47	738	398	463
Yellow cedar	69	56	213	309	46	125	1,357	307
Total	937,487	569,408	542,440	475,100	419,924	221,388	261,352	241,294

Source: U.S. International Trade Commission 2000. (1 cubic meter = 423 board feet)

According to the Softwood Export Council's (SEC) Europe representative, yellow cedar and western red cedar are highly sought after in certain niche markets in the EU. Yellow cedar is valued for its strength and decay-resistant properties in niche markets such as the wooden boat building industry. Western red cedar is used more often in residential applications such as high-end decking and outdoor furniture. Naturally decay-resistant species are much more decay-resistant than treated lumber. When treated lumber splits as it is exposed to natural elements, moisture can reach the inner core of the lumber, which will cause it to decay more quickly. Although naturally decay-resistant lumber is more expensive than treated lumber, many consumers who can afford it prefer these species because they are more durable, and since they are not chemically treated, it is thought to be healthier for the environment. The most common use for naturally decay-resistant lumber is in the decking and siding market. While western red cedar is naturally decay-resistant, price is the primary determinant of decking material for most European homeowners and treated European redwood (*pinus silvestrus*) and European whitewood (*picea abies*) are much more widely used than cedar, largely because they are less expensive (Hunt 2000).

Unfortunately, data regarding imports by species are not collected by European agencies. Since yellow cedar and western red cedar predominately originate in the US and Canada, US and Canadian export data from the US and

Canada will be used as a proxy for Western European import data for these species. US export statistics show only small volumes of yellow and western red cedar exported to Europe. Table 26 includes data regarding US western red cedar exports to leading destinations. The EU is clearly not a major market for US producers. This may be because US producers are focusing on supplying the strong US housing market. Canadian export statistics show much greater volumes of western red cedar shipped to the EU in 1999. As shown in Table 27, Canadian suppliers shipped almost 100,000 m³ of western red cedar to Western Europe in 1999 with the majority of the lumber destined for Belgium, France, and the UK. This disparity in exports between the US and Canada should indicate that there is the potential to increase exports of western red cedar from the US.

Table 26. Leading European destinations for US western red cedar, 1992-1998 (cubic meters).

	1992	1993	1994	1995	1996	1997	1998	1999
Spain	329	231	412	208	136	378	496	1,249
United Kingdom	282	72	285	153	190	188	159	884
Belgium Total	434	564	16	378	690	1,403	431	482
Netherlands	--	288	410	55	60	128	134	215
Germany	175	72	219	382	171	477	590	138
Ireland	67	--	--	--	--	--	14	79
Portugal	--	--	--	28	31	--	--	72
Austria	--	--	39	--	--	--	--	--
Denmark	--	--	--	67	1,432	--	17	--
Finland	--	--	15	--	--	--	--	--
France	47	501	480	331	245	127	66	--
Greece	--	--	--	27	--	--	--	--
Italy	--	38	539	--	137	68	190	--
Sweden	--	--	--	--	34	--	--	--
Total Western Europe	1,334	1,766	2,415	1,629	3,126	2,769	2,097	3,119

Source: U.S. International Trade Commission 2000. (1 cubic meter = 423 board feet)

Table 27. Leading destinations for Canadian western red cedar 1999 (cubic meters).

	1998	1999
Belgium	35,796	28,690
United Kingdom	16,093	17,865
Netherlands	15,105	15,136
France	20,652	14,510
Germany	9086	8,527
Denmark	6,230	4,286
Italy	3,469	2,982
Spain	694	1,011
Ireland	386	691
Switzerland	415	292
Finland	184	93
Sweden	46	26
Austria	38	22
Norway	47	--
Total Western Europe	108,241	94,131

Source: Statistics Canada 2000. (1 cubic meter = 423 board feet)

Table 28. Leading European destinations for US yellow cedar, 1992-1998 (cubic meters).

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	--	--	--	--	14	--	--	--
Belgium	--	--	--	--	--	--	18	43
Denmark	--	--	--	--	32	--	--	--
Denmark	--	--	--	--	--	--	--	16
Finland	--	--	--	13	--	--	--	--
France	--	--	--	--	--	23	4	150
France	--	--	--	--	--	23	4	150
Germany	--	--	--	242	--	18	61	--
Italy	31	24	--	54	--	--	177	35
Netherlands	38	--	--	--	--	--	--	--
Spain	--	32	--	--	--	84	1,097	34
United Kingdom	--	--	213	--	--	--	--	29
Total Western Europe	69	56	213	309	46	125	1,357	307

Source: U.S. International Trade Commission 2000. (1 cubic meter = 423 board feet)

Table 29. Leading destinations for Canadian yellow cedar (cubic meters)

	1998	1999
United Kingdom	34	4,022
Greece	--	441
France	21	99
Switzerland	78	50
Ireland	--	17
Belgium	173	--
Germany	29	--
Italy	3,486	--
Sweden	--	--
Total Western Europe	3,821	4,629

Source: Statistics Canada 2000. (1 cubic meter = 423 board feet)

Substantially lower volumes of yellow cedar were exported from the US and Canada to Western Europe. As shown in Table 29, Canada exported just over 4,000 m³ of yellow cedar lumber in 1999. Table 28 shows that the US exported only 307 m³ of yellow cedar lumber. It is more likely that although western red cedar and yellow cedar are reportedly, highly sought, the end markets that use these two species are high-end niche markets, which would explain the relatively low export volumes.

UK Decking Market

A leading end-use for naturally decay-resistant species is decking, a booming market in Western Europe and particularly the UK. American style wooden decks in the UK have increased from almost non-existence over the past two years to a much sought after home addition. Although statistics about the size of the decking market or the volume of lumber used do not exist, there are other indicators of the market size. For example, in 1996, there were five established deck installation firms, by 1999 there were 60 firms involved with producing and/or installing decks. According to Hicksons, the leading wood preservative supplier in the UK, the decking market in the UK has the potential to grow to between approximately US \$400-\$630 million (£250 million to £400 million) annually (~£1.57; US \$1= £.6357) (SEC Jan 2000). The Chairman of the Timber Decking Association (TDA) agrees that the decking market in the UK has the potential to grow exponentially. He stated "We feel, and market research is demonstrating, that the growth in the UK, with the increased interest in gardens and outdoor living, will be enormous" (TDA 2000). To keep pace with consumer demand, almost 400 large home centers have begun stocking decking products (Spencer 1999), although some experts feel outdoor decking may be a fad (Hunt 2000).

According to a survey by the TDA, consumer awareness for wood decking in the UK is high. Of 1,000 homeowners surveyed, 59% were very aware of timber decking. With further information to overcome any unfamiliarity with the term "decking", 81% were very aware. Over 45% of consumers surveyed thought timber decking had a high aesthetic appeal compared to other traditional surfaces. Patio-style decks were cited as the favorite style, and freestanding, *island* decks were rated second. Many consumers felt elaborate, elevated decks were too expensive. Negative perceptions of decking were related to climate, durability, maintenance, and price. However, when survey respondents were given information about the actual price of decks, most were pleasantly surprised (TDA 2000).

The popularity of timber decking is due in great part to surging consumer interest in linking the home and garden, which has been prompted by popular television home shows. Seventy-two percent of respondents to the TDA survey recognized decking from television and 86% recognized decking from magazines. Surprisingly, do-it-yourself centers and garden centers have not significantly contributed to consumer awareness. Only 10% and 4% of consumers, respectively, learned about decks from these two sources (TDA 2000).

While interest in decking is high, consumers appear to need information and advice. Of the consumers surveyed, two-thirds felt they needed more information about installation, 64% about cost, 63% about design, and 58% needed advice about where to purchase decking materials. Thirty percent of respondents stated they would look for decking at DIY centers and garden centers, yet only 17% and 9% of respondents said they would go to these two sources for advice, leading researchers to believe that DIY centers are missing some potential market share (TDA 2000).

Table 30 illustrates the leading wood product exports from the US to the UK. It is not possible to determine the volume of decking exported since decking does not have a specific harmonized code. Decking exports are most likely included in the category "other".

Table 30. Uses for American softwoods in the UK (1,000 cubic meters).

Product	1996		1997		1998	
	m ³	Percent	m ³	Percent	m ³	Percent
Furniture	10.4	31.1	13.1	31.1	12.7	31.9
Doors	12.5	37.1	15.2	36.1	14.3	36.0
Windows	1.8	5.4	2.5	5.9	2.3	5.9
Paneling	1.0	3.1	1.0	2.4	0.9	2.2
Flooring	0.2	0.7	1.0	2.4	2.0	5.0
Stairs	2.2	6.6	2.7	5.2	2.2	5.5
Moulding	0.8	2.4	0.9	2.1	0.8	2.0
Other	4.7	13.6	5.7	13.6	4.6	11.5
Total	33.6	100.0	42.1	100.0	39.8	100.0

Source: Softwood Export Council 2000. (1 cubic meter = 423 board feet)

Competitors and Pricing

The UK decking market has predominately used treated southern yellow pine, European softwoods, and tropical hardwoods (Pearce 2000). Leading species include softwoods such as southern yellow pine, Douglas fir, western red cedar, European redwood, European whitewood, and naturally decay-resistant tropical hardwoods such as bangkrai, sapele, and small volumes of teak.

Prices for imported softwood declined significantly during 1998 with the strong pound, high production levels in Sweden, the Asian economic decline, and poor demand. Despite a resurgence in the construction sector in 1999, the strong pound and depressed prices for Scandinavian and Baltic logs and lumber are keeping sawnwood prices down. Strong US demand and non-competitive pricing have cost US suppliers market share in the UK. From 1997 to 1998 US softwood exports to the UK fell from 51,000 m³ to 41,000 m³. US lumber prices remained stable during 1999, and exports to the UK are expected to remain flat (FAS 1999).

As shown in Table 25, southern yellow pine exports from the US to the EU far exceed the combined volume of naturally decay-resistant cedar. The naturally decay-resistant properties of western red cedar and yellow cedar are sought after, yet for most consumers the price is beyond their budgets. If western red cedar is to become

competitive in the European decking markets, suppliers will have to meet or beat competitor prices (Pearce 2000). The cost of treating timber is reportedly approximately \$40-\$50 per cubic meter (Timbmet 2000). Although, consumers are becoming more environmentally aware, the cost to purchase treated lumber is far less than the cost of naturally decay-resistant western red cedar or tropical hardwoods.

There are very few statistics maintained about the timber industry in the UK. There is no published information available regarding import volume by species and country of origin, nor price information. Approximate prices for competing species gathered through interviews of UK timber importers and decking manufacturers are included in Table 31. As shown, knotty grade western red cedar with one clear face, which UK decking companies purchase primarily from Western Canada, is the highest priced material. Typically, western red cedar and naturally decay-resistant hardwoods are used in high-end decks. While representatives from decking companies believed that western red cedar is suitable for decking, they stated that the cost limits its widespread use. There is also a geographic distribution for the type of decking material used, which is based primarily on cost. Hardwood and cedar decks are more prevalent in southern England, whereas treated softwoods are more common in the north.

Table 31. Approximate prices for lumber used in the UK decking market (US\$/m³)*.

Species	US\$/m ³	US\$/1,000 board feet
Scandinavian pine	\$270-\$280	\$638-\$622
Southern yellow pine	\$390	\$922
Radiata	\$390	\$922
Western red cedar	\$2,570-2,655	\$6,076-\$6,277
European redwood	\$210-\$240	\$496-\$544
Bangkrai/Balau	\$650-\$700	\$1,537-\$1,655
Teak	\$1,880-2,000	\$4,444-\$4,728
Sapele	\$785	\$1856
Iroko	\$785	\$1856

Source: Timbmet 2000 *Prices do not include treating

According to a representative of Timbmet, the most commonly used species in the UK decking market are Scandinavian pine, treated southern yellow pine, and radiata pine (Timbmet 2000). Timbmet, a firm that specializes in decks made of tropical hardwoods, estimates that a 540 ft² two level deck can easily cost \$4,800 (£7,500). Reportedly, design, installation, and sales expenses exceed the material cost. The company reports that despite the price premium for tropical hardwoods, Timbmet's hardwood sales surpass total (treated and untreated) softwood lumber sales because their upper-income consumers like the appearance of hardwood decking (Timbmet 1999). It may also follow that if products such as western red cedar become valued for appearance or durability these products will develop a following in upper-income niche markets. It should be stressed again, however, that price is the determining factor for the majority of English consumers when selecting decking material.

Other firms have elected to use treated European redwood from Sweden, Finland, and Russia. This timber is reportedly favored because it is kiln-dried to 18-20% moisture content, it machines very well, and it treats well. One firm signs annual price contracts with its suppliers to ensure stable pricing. Howarth Timber reports that the firm's most popular deck by far is constructed of 2x4s. Prices range from US \$290/m³ for Economy Ground Level Boards, to \$376/m³ for All-Purpose Deck Boards, to \$330/m³ for Excellent Quality Ground/Low Level Boards. The most popular are the moderately priced All-Purpose Deck Boards. The main competitor to European redwood from Scandinavia and Russia is domestic and Baltic whitewood. Whitewood is fast growing, yet it reportedly has large knots and it twists. Most consumers in the UK appear to value low price above appearance or quality, and demand for these lower priced materials is greatest (Hunt 2000).

Distribution System

The distribution system for decking varies from company to company and the type of market being served. One distribution system is focused on the DIY market where lumber is imported by sawmills or chemical treating companies, milled into decking lumber or kits, and sold to garden centers and home improvement retailers. The second distribution system is for the installed-decking market. In this case, sawmills or chemical treating companies

import and sell materials to smaller deck installation companies. In some cases, the importer/sawmill owns the deck design and installation company. Ostermann and Schewie, for example, produces decking lumber and decking kits and offers a complete design and installation service through its franchises, Archadeck (Spencer 1999).

Almost all western red cedar is imported into the EU through large import firms, sold to large domestic manufacturers, and produced into finished products. Reportedly, it is very uncommon for western red cedar to be sold through retail home improvement centers (Pearce 2000). Some of the leading importers of western red cedar and exterior use wood products are included in Appendix C.

I-DECK, a large UK deck manufacturer, predominately uses tropical hardwoods such as bangkrai (aka: damar laut, selangan batu no. 1, or yellow batu), a highly durable, knot-free, and insect resistant species. The company imports bangkrai that is branded with the company logo to signify it has passed strict quality control inspection. The lumber is received in long lengths in pack form and sold to importers who break the packs down to sell the lumber to timber retailers. The company expects to sell to DIY stores and garden centers soon. I-DECK decking is available in timber form, which generally requires professional installation, or in tiles, which the consumer can install as garden paths or to replace paving slabs (Timbmet 1999).

While data regarding decking by species in Europe does not exist, US deck price data can be used to examine the price differential between US species that compete with each other in the decking market. As shown in Figure 30, with infrequent exceptions, western red cedar is consistently higher priced than southern yellow pine, the leading US export for decking and outdoor use. Despite the erratic pricing of southern yellow pine, the price of southern yellow pine has been on average \$190 lower than the price of western red cedar, with only infrequent exceptions in 1992-1999. While western red cedar decking may be used in high-end decking applications, it is likely that southern yellow pine will maintain a much larger share of domestic and international markets in relation to western red cedar.

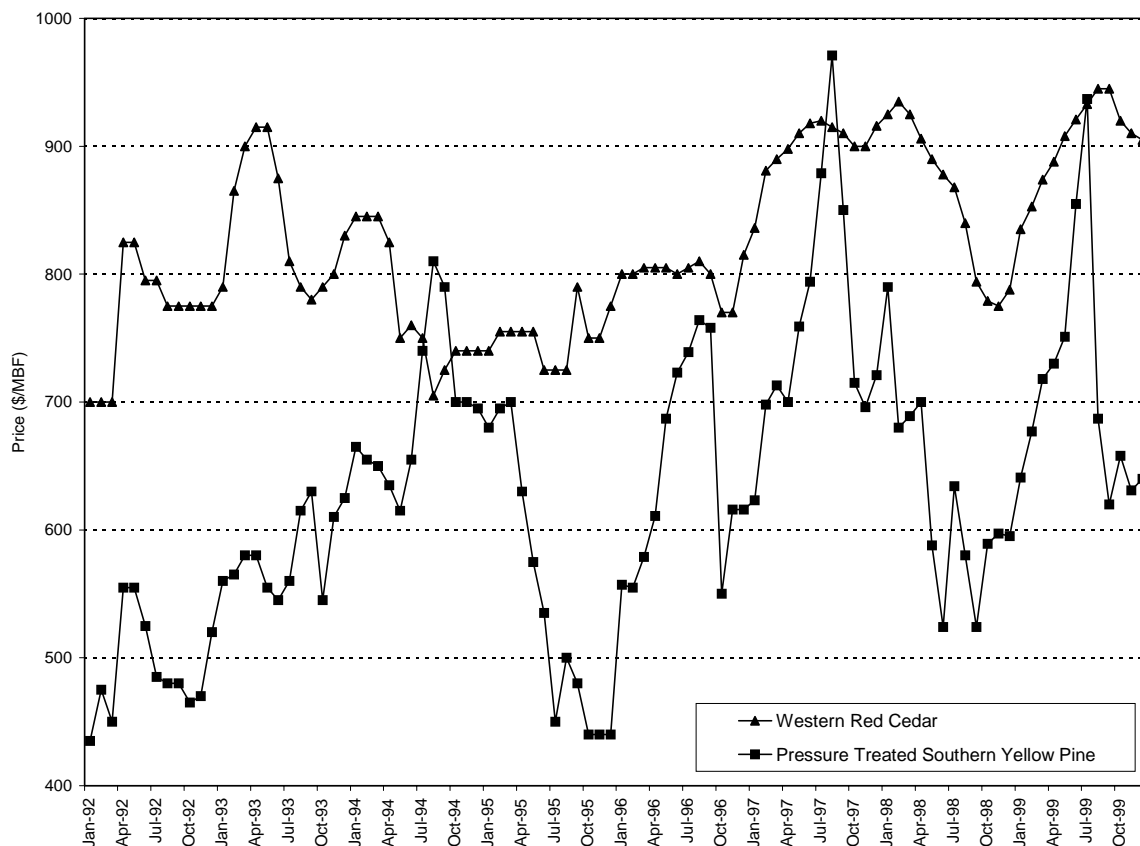


Figure 30. Average monthly US lumber decking prices from January 1992 - October 1999
(Source: Shook and Eastin 2000).

Other information about US use of siding materials may also shed some light on potential European use of western red cedar. According to a study of builder perceptions of western red cedar decking and siding by Shook and Eastin (1996), builders stated that they favor the ease of installation, beautiful appearance, and consumer status associated with cedar siding. The physical properties of western red cedar also make it resistant to the elements. However, as shown in Table 32, in 1995 western red cedar siding amounting to only 9.2% of the Puget Sound siding market. The most commonly noted detractors associated with western red cedar siding include poor product consistency and uniformity, and high-cost maintenance.

Based on builder responses analyzed in Shook and Eastin's research, suppliers should focus on price competition with other similar products. In international markets where there is no perception that western red cedar is superior in appearance and durability compared to other materials, suppliers should develop promotional campaigns that emphasize these aspects and that proper, yet easy maintenance will enhance the natural weather and insect resistant properties of western red cedar. However, it may be more beneficial to Alaska suppliers to focus on the US Pacific Northwest market. There are several factors that make the PNW market attractive to Alaska suppliers. First, suppliers can build on the high-status perception of western red cedar that already exists. Second, shipping costs to the Continental US are lower than shipping costs to Europe. Third, proximity to markets makes it easier for suppliers to initiate contracts and service buyers. Fourth, the US market for decking is large and red cedar is commonly used. Current estimates indicate that over 6.5 million decks are constructed on U.S residential structures on an annual basis at a cost of \$1.9 to \$3 billion. In 1999, slightly over 47.4% of new home decks were constructed with pressure treated lumber, followed by western red cedar, concrete, and redwood representing 18.5%, 14.1%, and 11.1% percent of the market, respectively (Shook and Eastin 2000). The popularity of western red cedar decking has increased and its use has doubled since 1995. Finally, increased harvest regulations coupled with increased demand for western red cedar in the PNW market should create opportunities for additional suppliers.

Table 32. Estimated square footage of various residential siding materials installed in 1994-1995 in the Puget Sound market, market share, and estimated share that the Puget Sound market represents for each residential siding material nationally.

Siding Material	Estimated Square Feet Installed (August 1994 through July 1995)	Puget Sound Market Share	Estimated share of the National Market Represented by the Puget Sound Market^a
OSB	14,029,146	51.3%	7.60%
Hardboard	3,532,245	12.9%	0.40%
Plywood	2,927,467	10.7%	2.48%
Western red cedar	2,510,960	9.2%	1.51%
Stucco	239,867	0.9%	NA ^b
Vinyl	1,081,440	4.0%	0.04%
Brick	1,012,693	3.7%	NA
Cedar Shakes/Shingles	945,467	3.5%	NA
Wood Fiber-Cement	908,480	3.3%	NA
Other (e.g. metal)	72,000	0.3%	NA
Spruce (solid)	66,667	0.2%	NA
Aluminum	3,467	0.0%	0.24%
Redwood	0	0.0%	NA
Total	27,329,899	NA	NA

Source: Shook and Eastin 1996

a Calculated using 1994 product shipment data provided by various industry associations.

b Not available due to lack of data or unreliable product shipment data

Western Red Cedar Decking and Siding in Denmark

According to interviews of Danish timber importers, demand for western red cedar siding is strong. Several importers anticipate use of western red cedar siding will increase in 2000 as construction industry in Denmark continues to improve (Pearce 2000). As shown in Table 33, housing starts in Denmark have been increasing since 1980. Table 34 also shows expenditures on new residential construction and repair and remodeling have increased substantially since 1980, indicating that even when spending on new construction was somewhat stagnant, spending on repair and remodeling increased (Ministry of Housing and Urban Affairs, Denmark 1999). A massive information campaign (www.trae.dk) by the Danish government and timber industry to promote the use of wood. This campaign has had a spin-off effect and has stimulated demand for timber decking and siding.

Denmark, with a population of 5 million, imports approximately 2 million cubic meters of sawn softwood per year, or 80% of total consumption (Bjørner 2000). Sweden and Finland supply approximately 90% of Denmark's timber imports. The remaining 10% is imported from the Baltic states, Russia, and the EU. Tropical hardwoods, are also used in the decking market.

While US softwood lumber exports to Denmark are declining, the overall demand for western red cedar is reportedly increasing. Danish architects are reportedly beginning to specify western red cedar in new projects. Total Danish imports of sawn western red cedar, are between 10,000 to 20,000 m³ (Bjørner 2000). However, US suppliers maintain a negligible share of the Danish western red cedar market. As shown in Table 35, the US has historically imported very low volumes to Denmark. Canada exported more western red cedar to Denmark, but volumes were still very low. Canadian suppliers exported only 6,230 m³ of western red cedar lumber in 1998 and 4,286 m³ in 1999. No western red cedar logs have been exported from Canada to Denmark during the past two years (Statistics Canada 2000). According to a representative at the Danish Timber Trade Federation, exterior siding and decking is becoming more popular, yet there are no statistics regarding market size, since these markets are so new.

Table 33. Danish housing starts, 1980-1998 (1,000 units).

Type	1980	1985	1990	1995	1998	1999
Detached single family	878	919	959	975	999	1,010
Other single family	154	205	266	299	308	311
Multi-family	891	899	922	948	959	963
Other	21	44	50	54	55	22
Total	2,109	2,228	2,353	2,427	2,461	2,371

Source: Ministry of Housing and Urban Affairs, Denmark 1999, Statistics Denmark 2000

Table 34. Danish Expenditures on residential construction and repair and remodel, 1980-1997
(1 billion Danish kroner, current prices).

	1980	1985	1990	1995	1997
Home construction	19.8	26.5	31.2	38.9	47.3
Repair and remodel	-	-	12.8	21.6	20.9

Source: Ministry of Housing and Urban Affairs, Denmark 1999

Table 35. US softwood lumber export volume to Denmark, 1992-1999 (cubic meters).

	1992	1993	1994	1995	1996	1997	1998	1999
Southern yellow pine	9,110	965	1,306	1,117	1,284	938	1,158	1,072
Softwoods, nesoi	0	0	232	155	132	540	32	388
Larch	0	0	0	0	0	0	0	332
Douglas fir	365	0	209	1,181	259	51	86	84
Yellow cedar	0	0	0	0	32	0	0	16
Lodgepole pine	62	166	90	17	0	0	0	0
Pine, NESOI	528	1,260	0	413	120	286	0	0
Western Red Cedar	0	0	0	67	1,432	0	17	0
Cedar, NESOI	0	34	42	0	35	13	0	0
Redwood	143	96	0	0	118	14	0	0
Sitka spruce	0	0	178	0	0	0	0	0
Total	10,208	2,521	2,057	2,950	3,412	1,952	1,381	1,940

Source: U.S. International Trade Commission 2000. (1 cubic meter = 423 board feet)

Distribution System

Typically, large importing firms broker decking and siding to timber yards and DIY retail stores. Decking and siding is generally installed by professional independent craftspeople or by do-it-yourself homeowners. The number of firms who install siding is difficult to determine since these firms are most likely general contractors and not wholly devoted to installing siding (Bjørner 2000).

German Market for Alaska (Yellow) Cedar

Overview of the German Economy and Construction Sector

US exports of wood products to Germany have declined steadily over the past few years. As shown in Table 36, softwood lumber import volume in 1998 was two-thirds lower than the volume imported just three years earlier. US imports of logs, lumber, and veneer are being replaced by imports from Scandinavia and Eastern Europe for several reasons, including the strong US housing market, high exchange rate of the US dollar, and higher cost of transporting products to Europe from the Western US. German manufacturers are importing more lumber and veneer and fewer logs. Industry experts report that softwood lumber and wooden panels will begin to be sold through construction material dealers and home improvement centers as opposed to the traditional system of selling products through importers and wholesalers (FAS 1999).

The largest volume of lumber from the US is Douglas fir, which is most likely used for construction lumber and window and door frames (Table 37). Cedar volumes are negligible. In many cases, tropical hardwood lumber is used because it is naturally decay-resistant, yet less expensive than Alaska yellow cedar.

Table 36. Germany's softwood lumber imports by source (cubic meters).

	1995	1996	1997	1998
US	116,570	93,747	51,299	45,900
Sweden	1,079,098	1,163,846	1,363,153	1,195,263
Finland	895,423	743,422	912,893	950,999
Lithuania	315,010	587,938	484,671	322,294
Czech Republic	229,314	449,324	517,349	486,545
Austria	221,153	338,973	408,957	416,089
Poland	351,733	314,723	394,518	398,176
Russia	478,592	252,372	289,489	218,384
Latvia	610,389	248,123	229,868	303,503
Norway	48,917	224,939	193,617	196,265
Canada	264,155	87,959	70,153	79,616
Total Non-US	4,493,784	4,411,616	4,864,668	4,567,134
Total	4,923,737	4,765,272	5,281,266	5,185,838

Source: Foreign Agricultural Service 1999. (1 cubic meter = 423 board feet)

Table 37. US softwood lumber exports to Germany, 1989-1999 (cubic meters).

	1992	1993	1994	1995	1996	1997	1998	1999
Douglas Fir	15,673	19,639	16,355	18,384	12,143	17,986	15,343	11,998
Softwood, NESOI*	12,543	5,042	6,242	6,242	4,962	12,879	27,974	4,201
Larch	853	108	1,255	221	21	610	921	2,457
Southern Yellow Pine	--	--	--	--	--	1,611	1,290	1,252
Ponderosa Pine	2,915	2,138	2,110	1,812	908	1,611	1,290	1,252
Pine NESOI	--	--	--	--	--	5,566	723	1,023
Spruce-Pine-Fir	--	--	--	--	--	381	2,683	757
Hemlock	2,440	1,105	1,343	533	58	1,517	62	385
Eastern White & Red Pine	2,156	308	--	--	--	223	24	224
Spruce, NESOI	83	5,713	1,046	444	--	595	68	184
Western Hemlock	--	--	--	--	--	407	913	147
Lodgepole Pine	515	176	78	--	122	784	75	118
Redwood	263	241	39	228	539	500	848	74
Fir	--	--	--	--	--	338	1,127	26
Yellow Cedar	--	--	--	242	--	18	61	--
Cedar, NESOI	322	37	--	82	202	--	--	--
Western Red Cedar	175	72	219	382	171	--	--	--
Fir	1,370	709	435	465	321	--	--	--
Pine NESOI	49,164	20,821	16,488	5,529	4,759	--	--	--
Southern Yellow Pine	79,980	51,218	53,355	43,132	33,552	--	--	--
Sitka Spruce	288	242	478	21	--	--	365	--
Total	168,740	107,569	99,443	77,717	57,758	45,026	53,767	24,098

U.S. International Trade Commission 2000 *NESOI: Non-specified (1 cubic meter = 423 board feet)

Germany's Construction Industry

While the number of housing starts in Germany in 1999 was almost 9% lower than the number of starts in 1998, there has been a steady increase in remodeling activity. In 1996, the German housing industry entered a recession. Figure 31 shows the spike, decline, and recent recovery of the construction industry. The construction sector in Western Germany started to slowly recover in 1999 as the demand for single family homes strengthened, yet the number of building permits for single family homes in Eastern Germany declined 20% during the first eight months of 1999. Market recovery may be temporary, however. Industry analysts expect subsidies that stimulated home construction, particularly in Eastern Germany, will be eliminated, which may reduce the number of single family housing starts in 2001 and beyond (FAS 1999).

Most German homes are constructed of masonry, although wood frame construction has become more prevalent in recent years, particularly in Eastern Germany. In 1998, 13,300 prefabricated wooden homes were built, a 2,250 unit increase from the prior year. Industry experts estimate that approximately 805 of the new homes are wood-frame construction. Few prefabricated homes are imported from the US, however, since German building codes are very stringent (FAS 1999).

There have also been changes in the structure of suppliers in Germany. Several German planing mills have been forced out of business by increased competition from Nordic mills, who have changed their marketing strategy to sell directly to end-users as opposed to distributors. In an attempt to protect German manufacturer's share of the domestic market, several firms are discussing mergers (SEC 1999).

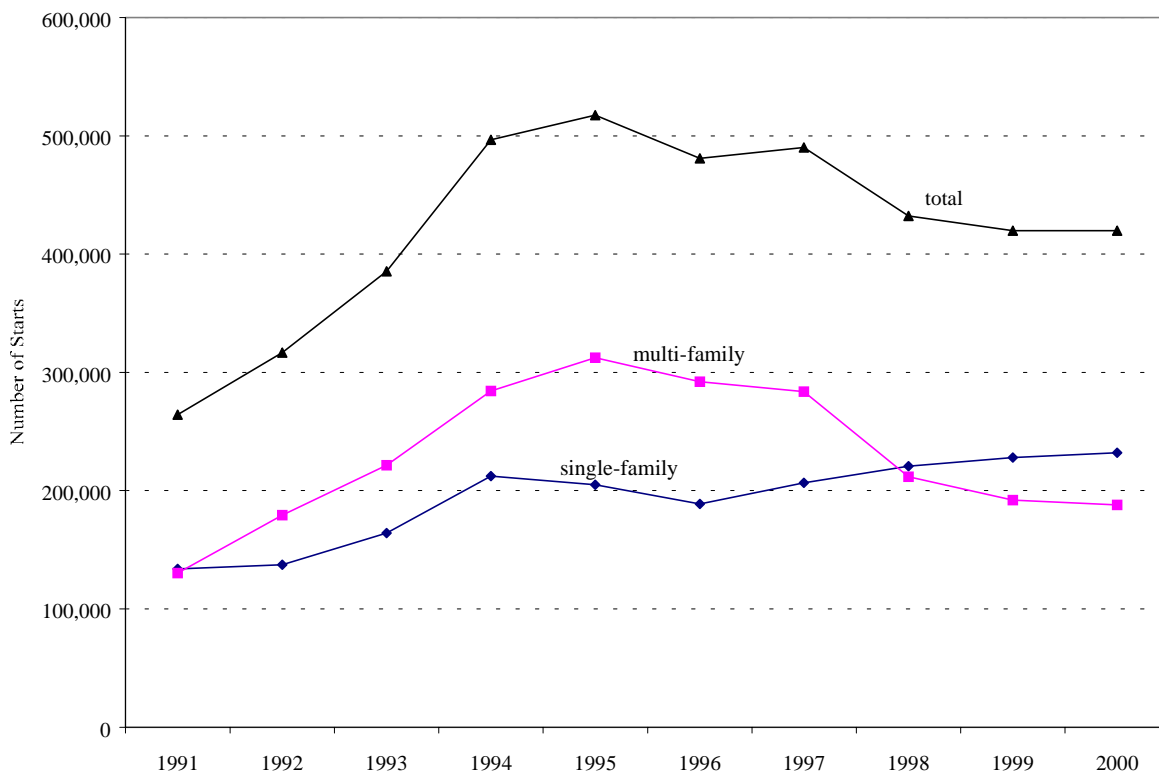


Figure 31. German housing starts, 1991-2000* (Source: Foreign Agricultural Service 1999). *estimated

Windows

German wooden window manufacturers have been especially impacted by the depressed state of the building industry. According to attendants at FENSTERBAU 2000, a trade show for doors and windows held in Neuremberg, the mainstay of the window market is home renovation and not new construction. As shown in Table 38, the market share for wooden windows has fallen from 34% of the market in 1993 to an estimated 24% in 2000, and there has been a direct share shift to plastic windows. According to the FAS, individuals are buying fewer wooden windows because they are concerned about the environmental impacts associated with tropical wood. Plastic windows are also cheaper and easier to install and maintain. Temperate softwoods are not being used as substitutes for tropical wood because they are considered high maintenance. When softwoods are used, window frames are generally made from laminated stock instead of solid wood (FAS 1999).

Another leading challenge for German window manufacturers is lower cost wood imports from the Czech Republic, Slovakia, and Poland. While lower cost suppliers from Eastern Europe are supplying more volume to Germany, some manufacturers are using larch and Douglas-fir as well, although larch imports lag far behind spruce and pine (SEC 1999). As shown in Table 39, Swedish and Finnish producers supply larger volumes of spruce and fir, yet Eastern European suppliers are quickly gaining market share. From 1998 to 1999, softwood lumber volume from Scandinavian suppliers either declined or rose only slightly. On the other hand, lumber imports from some Eastern European suppliers reached triple digit growth (SEC 2000a).

In the market for window scantlings, meranti, a tropical hardwood is among the most price competitive. As shown in Table 40, meranti is the leading price competitor with solid pine and spruce scantlings, both of which are sourced within Europe. Finger jointed scantlings, however, are the most price competitive.

Table 38. German window production by material, 1993-1000 (million units).

	1993	1994	995	1996	1997	1998	1999	2000*	1993 Share	2000 Share
Wooden	7.9	7.6	7.4	6.9	6.6	5.9	5.3	5.1	34%	24%
Plastic	9.9	11.8	12.3	2	12.6	12.2	11.5	11.5	43%	55%
Aluminum	4.7	5.2	5.2	4.9	4.4	3.7	3.7	3.6	20%	17%
Aluminum/wood	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8	2%	4%
Total	23.0	25.2	25.6	24.5	24.3	22.6	21.3	21.0	--	--

Source: Foreign Agricultural Service 1999. *estimated

Table 39. German softwood lumber imports (cubic meters).

Commodity Number	Spruce/Fir HS 4407 10 91			Pine HS 4407 10 93			Other softwood HS 4407 10 99		
	Jan-Sept		% change	Jan-Sept		% change	Jan-Sept		% change
	1998	1999		1998	1999		1998	1999	
France	\$2,121	\$1,507	-29%	\$4,729	\$4,508	-5%	\$15,770	\$3,424	-78%
Belgium	\$19,186	\$36,284	89%	\$479	\$486	1%	\$2,858	\$1,557	-46%
Netherlands	\$16,911	\$6,136	-64%	\$1,108	\$447	-60%	\$5,283	\$1,143	-78%
Denmark	\$12,840	\$14,513	13%	\$2,197	\$1,080	-51%	\$4,770	\$3,664	-23%
Sweden	\$586,929	\$490,305	-16%	\$41,646	\$42,291	2%	\$714	\$299	-58%
Finland	\$555,533	\$553,677	0%	\$72,544	\$60,970	-16%	\$282	\$84	-70%
Austria	\$134,009	\$139,554	4%	\$8,434	\$6,578	-22%	\$58,326	\$36,279	-38%
Others	\$619	\$2,289	270%	\$2,438	\$2,735	12%	\$366	\$948	159%
EU	\$1,328,148	\$1,244,265	-6%	\$133,575	--	100%	\$88,329	\$47,398	-46%
Norway	\$108,453	\$134,662	24%	\$5,334	\$5,417	2%	--	--	--
Estonia	\$34,620	\$61,376	77%	\$3,225	\$3,155	-2%	\$15,809	\$19,769	25%
Latvia	\$158,007	\$172,037	9%	\$22,977	\$23,155	1%	\$42,678	\$50,563	18%
Lithuania	\$184,560	\$172,914	-6%	\$10,707	\$16,045	50%	\$56,697	\$36,666	-35%
Poland	\$54,919	\$50,703	-8%	\$87,740	\$98,796	13%	\$99,038	\$99,187	0%
Czech Rep.	\$160,801	\$208,016	29%	\$8,148	\$11,461	41%	\$207,366	\$200,846	-3%
Romania	\$6,857	\$11,746	71%	--	\$98	--	\$5,795	\$33	-99%
Others	\$8,893	\$13,821	55%	\$519	--	--	\$14,838	\$28,392	91%
Europe	\$2,045,258	\$2,069,540	1%	\$272,225	\$277,222	2%	\$530,590	\$482,881	-9%
Ukraine	\$1,310	\$6,598	404%	\$7,574	\$13,323	76%	\$5,490	\$9,354	70%
Belarus	\$63,294	\$138,073	118%	\$37,985	\$14,957	-61%	\$13,350	\$11,150	-16%
Russia	\$160,771	\$246,003	53%	\$4,511	\$64,631	1333%	\$38,469	\$49,979	30%
Other CIS States	\$63	\$108	71%	--	\$804	--	\$475	\$287	-40%
US	\$525	\$418	-20%	\$1,847	\$1,378	-25%	\$32,316	\$22,997	-29%
Canada	\$44	\$210	377%	--	\$132	--	\$43,942	\$26,396	-40%
Others	\$38	\$82	116%	\$257	\$720	180%	\$1,557	\$1,650	6%
Total	\$2,271,303	\$2,461,032	8%	\$324,322	\$373,076	15%	\$666,189	\$604,694	-9%

Source: Softwood Export Council 2000. (1 cubic meter = 423 board feet)

Table 40. German window scantling prices (deutschmark per lineal meter).

	December 1999	March 2000
Meranti	7.20-7.50	7.40-7.90
Spruce		
one-piece slats	8.40-9.50	8.40-9.40
finger-joint	6.10-7.00	6.00-7.00
Pine		
one-piece slats	7.70-8.50	7.50-8.70
finger-joint	5.40-6.20	5.00-6.20
Larch	12.00-14.00	11.00-14.00
Oak	18.40-19.50	17.00-21.00
Hemlock	9.80-9.90	9.00-10.00
Douglas fir	-	-
White seraya	-	-

Source: Softwood Export Council 2000a

Certified Forest Products

A growing trend in the European market for wood products is certified products. Certified forest products (CFPs) are products that are certified by a third party certification organization to be manufactured from timber grown on sustainably managed forests. To assure that end users of certified products are using products that are actually "certified", a chain of custody certificate accompanies all certified products. This chain of custody certification requires businesses to establish systems to ensure that certified forest products are labeled from when they harvested, when they go through the manufacturing process, and to the final sales destination (Certified Forest Products Council 1998). Certified forest products have enjoyed only limited success in North America, yet European consumers have been the driving force behind the CFP movement. Pressure from consumer and environmental groups in the EU to provide documentation of sustainable forestry practices for imported wood has stimulated the demand for certified products (UN/ECE 1999).

Firms that include certified forest products in their product line may find that they can more easily obtain access to markets and customers seeking certified products. It may be worth considering for Alaska firms interested in accessing the European market for wood products to provide certified products. Granted, these markets will probably be small volume niche markets such as the wooden boat building industry or high-priced decking. However, as shown in the case of Collins Pine a supplier of both certified and non-certified wood products, a company that is discussed later in this section, offering certified products can help suppliers establish contracts with customers who may later purchase non-certified products as well.

Demand

Table 41 lists the leading certified buyer groups in the EU. There are also buyers groups developing in other parts of Europe. Club ProForet is a newly established group of seven Swedish and French companies that favor products certified by the Forest Stewardship Council (FSC). While sales of certified wood constitute only a small portion of total wood sales, the demand for certified wood is increasing (AF&PA 1999a). Furniture grade pine (European redwood), joinery, and other pine lumber are the most common products in the certified wood market (UN/ECE 1999). In addition to pressure from buyers groups to move toward certified products, some public organizations have banned the use of tropical wood and have written standards for certified products. Although these standards are not nationally recognized, they have been criticized as a trade barrier.

The trend toward purchasing FSC certified products has been particularly strong in the UK over the past five years. A group of 85 large and small home improvement retailers known as the *1995 Plus Group*, organized by the World Wide Fund for Nature (WWF), has made a voluntary commitment to increase purchases of FSC certified wood.

Table 41. Retail buyers groups in Europe's leading importing countries, 1999.

Country	Buyer Group	Number of Members
Austria	Gruppe 98	26
Belgium	Club 1997	81
Germany	Gruppe 98	31
Netherlands	Har Voot Hout	11
Netherlands	FSC Linked	473
Spain	WWF Grupo 2000	N/A
UK	1995 Plus Group	89

Source: UN/ECE 1999

Potential demand for CFPs is thought to be greatest in the UK since consumer awareness about the term *sustainable forest management* is highest of all EU countries. Of individuals surveyed, just over 50% of consumers in the UK were aware of the term, compared to 25% in Austria, 18% in Germany, and 8% in France and Italy (Rametsteiner 1998). Another survey also found that 60% of consumers polled would be interested in information about certification, and 65% felt that a sustainable forest management system or certification is needed (UN/ECE 1999).

The volume and value of CFP trade in the UK is unknown, since CFPs have no harmonized code, or separate customs classification. It is known, however, that in 1998, 15,000-20,000 m³ of FCS certified wood was sold in the Netherlands, or 2% of the Dutch wood market. The majority of these imports originated in Brazil, with lesser volumes supplied domestically or imported from Poland and Malaysia (UN/ECE 1999). AssiDoman, a Swedish firm, is expected to sell 100,000 m³ of certified wood to the UK home improvement market in 1998, and the firm forecasted that sales would increase in 1999 (UN/ECE 1999).

Supply

According to an unpublished study regarding demand for CFPs, in mid-1999, only an estimated 600,000 m³ of certified wood was available in the EU. Based on the area of certified forestland in Europe in 1998, there is the potential to produce 20,000,000 m³ of certified timber per year (UN/ECE 2000). Worldwide, there were 39 million acres of certified wood. As shown in Figure 32 the majority of these forests are located in Sweden (59%) and Poland (17%). US certified wood producers may find the EU a difficult market to enter since the bulk of certified wood is produced in Europe, and new initiatives developed in Europe are encouraging greater domestic production. The Woodland Assurance Scheme (UKWAS) was initiated in 1999 by the UK Forestry Commission and endorsed by the FSC. The program should open the way for a large proportion of forests in the UK to be FSC certified during 2000. Sweden's entire industrial forestland has been FCS certified. There are also large areas of FSC certified forests in Poland that are used to supply wood to the UK's do-it-yourself market. Finally, Malaysia and Indonesia are working with the FSC to have portions of their forestlands certified (FAS 1999). While Figure 32 illustrates the proportions of forests that are certified, it can be somewhat misleading as an indicator of certified wood available in the marketplace. For example, Collins Pine, a US wood products supplier, certifies approximately 50% of the firm's production, yet less than 5% is labeled and sold as CFPs because there is a lack of demand.

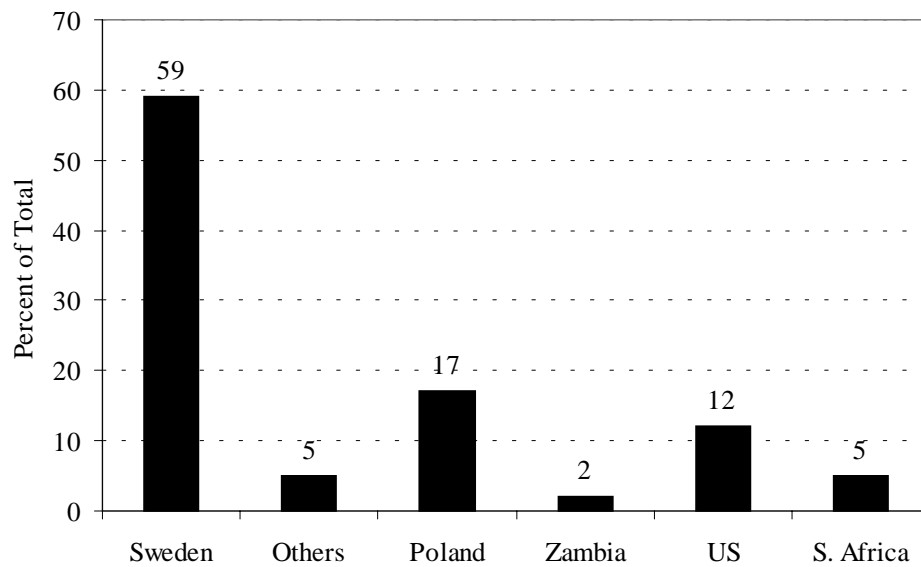


Figure 32. Estimated potential production of FCS-Certified timber, 1999 (Source: UN/ECE 1999).

European government and FSC programs have developed initiatives to promote the use of certified wood products, yet consumption is still low. Suppliers are also reluctant to certify their forests. Surveys of forest owners believe little return, both ecological or economic, comes from certified forestry. The majority of companies in Finland, the UK, and Germany that responded to the Forestry Wood Chain survey believe the price premium for certified roundwood will be less than 5%, if any. Two-thirds of sawmill representatives thought they would have to absorb the additional cost (UN/ECE 2000). From these findings, Rametsteiner speculates that sawmills would have to charge an additional 3% for lumber, which makes it difficult to succeed in increasingly competitive commodity markets.

According to a study by Forsyth (1998), companies have not obtained consistent premiums from CFPs. Interviews of 11 companies in the US and EU found that six had paid premiums between 5-20% and four stated their customers paid premiums between 5-10%. AssiDomän in Sweden reports that it garners approximately 6% more for certified lumber than uncertified (UN/ECE 2000).

While profits for CFPs do not appear to be covering the added expenses incurred at this time, marketing CFPs may have other benefits. Selling CFPs may give producers access to niche markets, it may help promote a company's image as "environmentally aware", and it may help develop strategic marketing networks. Certification may also help companies differentiate their product, which can be particularly important in highly competitive commodity markets. One small wholesaler noted that the real value in certification lies in the ability to maintain or improve market share. Lumber typically has a low profit margin, yet this wholesaler noted that certified products commanded the full margin more often (UN/ECE 2000). Offering certified products may also help a company enter new markets first selling certified products, then possibly other, non-certified products. For example, by producing certified products, Collins Pine was able to begin selling CFPs to a large retailer and a large furniture company. Small European importers and wholesalers have found that selling CFPs gives them access to buyers from large DIY retail chains (UN/ECE 1999).

Regulatory Constraints

In 1998, the European Union (EU) was the third leading export destination for US wood products, importing over \$1.2 billion annually. However, US suppliers face several obstacles to supplying European buyers. First, since the EU expanded to include Sweden, Finland, and Austria in 1995, the EU has become more than 70% self sufficient in supplying its wood needs, up from 40% self sufficiency prior to 1995. Second, US suppliers are finding it increasingly difficult to competitively offer products to the EU as the US dollar has strengthened, making it more

attractive for European buyers to purchase from countries with similar exchange rates. Countries such as Korea, China, Japan, and Eastern Europe are becoming more competitive in supplying the European market as a result of more consistent exchange rates with the EU (AF&PA 1999a). Third, trade barriers instituted by the EU have given domestic processors a competitive advantage over international producers. There are several other regulations that hinder the competitiveness of US, and specifically Alaska producers, including phytosanitary restrictions, restrictions on treated lumber, tariffs, and metric labeling requirements. The following are leading restrictions to the import of US wood products.

Phytosanitary Restrictions on Green Coniferous Wood Products

In 1980, the EU enacted a ban on all green softwood wood products from the US and many hardwood species. This ban was amended in 1993 to allow all softwood products, except western red cedar, to enter the EU if accompanied by a certificate of heat treatment of a phytosanitary certificate. Western red cedar does not need a certificate of heat treatment since it is naturally pest resistant. (AF&PA 1999a).

Duty Free Quota on Softwood Plywood Imports and Scandinavian Supplier Competition

Since 1987, the US has been operating under a duty-free quota on all softwood plywood. Under the agreement, the first 650,000 cubic meters of softwood plywood from any origin into the EU is duty-free each calendar year. The quota is usually met during the first quarter. Thereafter, US softwood plywood exports are subject to the full 7% tariff rate (AF&PA 1999a).

The tariff on US softwood plywood is compounded by a dramatic expansion in the production capacity of Scandinavian countries. This increase in capacity is impacting US market share, particularly the post-quota amounts in which the EU tariff applies. The EU has generally imported more than 1 million cubic meters of softwood plywood from the US annually, the added Scandinavian capacity combined with the tariff has caused US competitiveness to decline (AF&PA 1999a).

In addition to the duty-free softwood plywood quota, the EU also has a General System of Preferences (GSP) program. The GSP mandates that certain third world countries such as Brazil, Russia, Poland, and the Baltic states are given country specific quotas. The quotas allow products to enter the EU countries at a tariff level 70% the normal rate and are applied for after these countries have exported good exceeding the generic duty free quota volume (AF&PA 1999a).

Competitors

Eastern European Supplier Competition

While the infrastructure in Eastern Europe is generally below western standards, Eastern suppliers are making inroads into the western European market for several reasons. First, suppliers in Eastern Europe, in an attempt to generate western currency, often sell products below cost. Second, labor costs in Eastern Europe are reportedly 1/30 the cost of labor in the Western Europe and the US (Braden 2000). Third, starting on July 1, 1999 Hungary, Poland, Slovenia, Czech Republic, and Estonia eliminated tariffs on veneer, lumber and panel products imported from outside of the EU. Other Eastern and Central European countries that want to join the EU have also begun to eliminate tariffs on primary wood products. The intention is to import raw materials, produce value-added products domestically, and import finished products to the EU. Tariff elimination could keep US products out of a \$20-\$40 million market for hardwood products in Central and Eastern Europe (AF&PA 1999a).

The price differential for products from Central and Eastern Europe appears to have made inroads into the EU market. While political and economic instability reportedly can make importing wood products from Eastern Europe, approximately 80-90% of German furniture manufacturers or importers interviewed for a past CINTRAFOR project stated that they import wood from Eastern Europe. There are drawbacks to importing from Eastern and Central Europe however. Most Eastern European suppliers do not have kiln-drying capabilities and the countries often do not adequate infrastructure in place to facilitate the efficient delivery of products (Braden 2000).

Strategic Recommendations

While there are markets in the EU for naturally decay resistant wood products, Alaska species such as western red cedar and Alaska (yellow) cedar face five basic obstacles: 1) the niche markets where they could be used are very small, 2) The end-uses for these species are dominated by lower cost domestic species, 3) in high-end niche markets where Alaska species could be used, tropical species dominate, 4) the cost of transporting products from the Western US to Europe is high 5) the US dollar has been strong and exchange rates have fluctuated, making prices for US products less competitive and stable compared to European wood products. The markets where naturally decay resistant species could be used include the decking market in the UK and the siding market in Denmark, which utilize western red cedar and lesser amounts of Alaska (yellow) cedar. However, Alaska species encounter formidable competition from lower cost European redwood and European whitewood and expensive tropical hardwoods. The UK decking market is dominated by lower priced domestic redwood and whitewood, and tropical wood dominates the high-end decking market.

If Alaska producers are interested in supplying the UK decking market they must do two things. First, they must supply products that are cost competitive. It would be unwise to focus on selling higher-cost, naturally decay resistant species to the deck market aimed at the average income consumer. Instead, Alaska species should compete with naturally decay resistant tropical species. However, western red cedar is reportedly approximately \$650-690/m³ more than teak, the highest priced tropical wood used for decking, which means that competing even with high priced tropical species could be difficult (Timbmet 2000). Second, if Alaska producers are able to supply Alaska species at a cost competitive rate, they must still work to improve consumer awareness of western red cedar in the decking market.

Alaska suppliers may consider obtaining FSC certification as a marketing tactic for selling wood products to Europe, and particularly the UK, where certified products have become popular. Some firms include certified wood products in their product lines as way to help them establish a contract and later sell non-certified wood products as well. Since the infrastructure of the Alaska forest products industry is relatively flat - the landowner typically owns the processing facility as well, chain of custody certification would be relatively simple to track. However, firms should first consider the limited size of the naturally decay resistant market before jumping to the next step of considering certification.

Unfortunately, little information about the Danish market for naturally decay resistant siding exists. While US exports to Denmark are declining, the demand for western red cedar is reportedly increasing. Danish architects are reportedly, beginning to specify western red cedar in new projects. Total Danish imports of sawn western red cedar, are reportedly between 10,000 to 20,000 m³, although no officials exist to verify these numbers (Bjørner 2000). The US has exported no western red cedar to Denmark in the past few years. Canadian suppliers are not faring much better. Only 6,230 m³ of western red cedar lumber was exported from Canada to Denmark in 1998 and 4,286 m³ were exported in 1999. The Danish decking market is extremely difficult to characterize because it is very new and no statistics about the market have been collected. According to a representative at the Danish Timber Trade Federation, exterior siding and decking is becoming more popular, yet there are no statistics regarding market size, since these markets are so new.

Since the market is difficult to characterize it is also difficult to provide firms with recommendations on whether they should approach this market or how they should do it. US and Canadian export statistics indicate that the Danish market for western red cedar is extremely small. Given the challenges of introducing a new product, securing contracts in a foreign country, and the expense of servicing foreign markets, it does not appear that the market is large enough to justify the additional time and risks associated with entering a new export market. The market may at some point become large enough to consider, but at this time it appears premature.

The German market for yellow cedar also faces several challenges. The market share for wooden windows in Germany has fallen from 34% of the market in 1993 to an estimated 24% in 2000, and there has been a direct share shift to plastic windows. According to the FAS, individuals are buying fewer wooden windows because they are concerned about the environmental impacts associated with tropical wood. Plastic windows are also cheaper and easier to install and maintain. Temperate softwoods are not being used as substitutes for tropical wood because they are considered high maintenance. When softwoods are used, window frames are generally made from laminated stock instead of solid wood.

Another leading challenge for softwood suppliers is lower cost wood imports to Germany from the Czech Republic, Slovakia, and Poland. From 1998 to 1999, softwood lumber volume from Scandinavian suppliers either declined or rose only slightly. US softwood lumber exports to Germany declined 60% from 1993 to 1995 and yellow cedar lumber exports have been negligible. On the other hand, lumber imports from some Eastern European suppliers achieved triple digit growth. The combined obstacles of the declining use of wooden windows and the increasing competition from lower cost Eastern European timber suppliers makes the German market particularly unattractive for Alaska suppliers.

A more promising market may be the US PNW market for western red cedar used for decking and siding. Current estimates indicate that over 6.5 million decks are constructed on U.S residential structures on an annual basis at a cost of \$1.9 to \$3 billion. Slightly over 47.4 of new home decks were found to be constructed with pressure treated lumber, followed by western red cedar, concrete, and redwood representing 18.5, 14.1, and 11.1 percent of the market, respectively (Shook and Eastin 2000). Increasingly strict harvest regulations about allowable harvest areas in the US PNW coupled with the increasing demand for western red cedar decking and siding may present an opportunity for Alaska suppliers. Harvest volumes in British Columbia are also declining. Finally, the logistics of servicing a regional as opposed to international market are numerous. Regional markets are easier to access because there are no differences in language or consumer preferences, and they are closer, making shipping, establishing contracts, and providing after sales service easier. The PNW market is particularly suited to Alaska western red cedar producers because products must go through Seattle en-route to international destinations anyway.